

## Search for Selection Tutorial Schedule

### Day 1: Tests of neutral trait divergence (WL Chapter 12)

8:00 Breakfast  
8:45 Welcome and Introduction to NIMBioS, Suzanne Lenhart  
9:00 Lecture 1: Drift in the mean of Quantitative Traits  
10:30 Break  
11:00 Lecture 2: Rate-based and time-series based tests  
12:30 Lunch  
1:30 Lecture 3: Qst vs Fst  
3:00 Break  
3:30 Lecture 4: Orr QTL tests (and their extensions)  
5:00 Reception

### Day 2: Tests based on Molecular Data I (WL Chapters 8, 9)

8:00 Breakfast  
8:45 Lecture 5: Sweep theory  
10:15 Break  
10:45 Lecture 6: Genome-wide Signatures from repeated past selection  
12:15 Group Photo  
12:25 Lunch  
1:30 Lecture 7: Polymorphism-based tests 1: Allele frequency changes and Lewontin-Krakauer tests  
3:00 Break  
3:30 Lecture 8: Polymorphism-based tests 2: Genome pattern-based tests and SFS tests

### Day 3: Tests based on Molecular Data II (WL Chapters 9, 10 )

8:00 Breakfast  
8:45 Lecture 9: Polymorphism-based tests 3: Haplotype-based tests  
10:15 Break  
10:45 Lecture 10: Polymorphism-based tests 4: Domestication genes and other examples  
12:15 Lunch  
1:30 Lecture 11: Divergence-based tests 1: HKA and MK tests  
3:00 Break  
3:30 Lecture 12: Divergence-based tests 2: Rate of adaptive substitutions, Poisson random field models

### Day 4: Estimating Individual fitness (WL Chapter 29)

8:00 Breakfast  
8:45 Lecture 13: Episodes of Selection and the Assignment of Fitness  
10:15 Break  
10:45 Lecture 14: Variance in Individual Fitness, Bateman gradients, Trait-fitness associations I  
12:15 Lunch  
1:30 Lecture 15: Descriptions of Phenotypic Selection 1: Basics  
3:00 Break  
3:30 Lecture 16: Descriptions of Phenotypic Selection 2: Fitness surfaces

### Day 5: Trait-fitness associations II (WL Chapter 30)

8:00 Breakfast  
8:45 Lecture 17: Multivariate selection 1: Basics  
10:15 Break  
10:45 Lecture 18: Multivariate selection 2: Fitness surfaces  
12:15 Lunch and Depart

